

CLAIMS

What is claimed is:

1 1. In a text-to-speech system, a method of converting text-to-speech comprising:
2 receiving a text input;
3 comparing said received text input to at least one entry in a text-to-speech cache
4 memory, wherein said entry in said text-to-speech cache memory specifies a
5 corresponding spoken output; and
6 if said text input matches one of said entries in said text-to-speech cache
7 memory, providing said spoken output specified by said matching entry.

2 2. The method of claim 1, wherein said text-to-speech cache entries include said
spoken output.

3 3. The method of claim 1, wherein said text-to-speech cache is shared across
multiple text-to-speech processes.

4 4. The method of claim 1, further comprising:
logging each said match of said text input with a text-to-speech cache entry.

1 5. The method of claim 1, wherein said text input does not match an entry in said
2 text-to-speech cache memory, said method further comprising:
3 determining a spoken output corresponding to said text input; and
4 storing an entry in said text-to-speech cache memory corresponding to said text
5 input, wherein said entry specifies said determined spoken output.

1 6. The method of claim 5, further comprising:
2 removing one of said entries in said text-to-speech cache memory.

1 7. The method of claim 5, wherein each said entry in said text-to-speech cache
2 memory has a score, said method further comprising:
3 periodically updating each said score.

1 8. The method of claim 7, further comprising:
2 removing one of said entries in said text-to-speech cache memory having a
3 lowest score.

1 9. The method of claim 1, wherein said received text input includes corresponding
2 attributes and said entries in said text-to-speech cache memory include attributes.

1 10. The method of claim 9, said comparing step further comprising:
2 comparing said attributes of said received text input with attributes of said entries
3 in said text-to-speech cache memory.

1 11. A method of converting text-to-speech using a text-to-speech cache memory
2 having a plurality of entries, wherein said entries comprise a processed form specifying
3 a spoken output, said method comprising:

4 receiving a text input;

5 processing said text input to determine a form specifying a spoken output for
6 said received text;

7 comparing said determined form of said text input with said entries in said text-
8 to-speech cache memory;

9 if said text input matches one of said entries in said text-to-speech cache
10 memory, providing said cached speech output specified by said matching entry.

1 12. The method of claim 11, wherein said text-to-speech cache entries include said
2 spoken output.

1 13. The method of claim 11, wherein said text-to-speech cache is shared across
2 multiple text-to-speech processes.

1 14. The method of claim 11, further comprising:
2 logging each said match of said text input with a text-to-speech cache entry.

1 15. The method of claim 11, wherein said text input does not match an entry in said
2 text-to-speech cache memory, said method further comprising:
3 determining a spoken output corresponding to said text input; and
4 storing an entry in said text-to-speech cache memory corresponding to said text
5 input, wherein said entry specifies said determined spoken output.

1 16. The method of claim 15, further comprising:
2 removing one of said entries in said text-to-speech cache memory.

1 17. The method of claim 15, wherein each said entry in said text-to-speech cache
2 memory has a score, said method further comprising:
3 periodically updating each said score.

1 18. The method of claim 17, further comprising:
2 removing one of said entries in said text-to-speech cache memory having a
3 lowest score.

1 19. A method of converting text-to-speech comprising:
2 storing a plurality of entries in a text-to-speech cache memory, wherein each
3 said entry comprises a processed form specifying a spoken output;
4 assigning a score to each one of said plurality of entries;
5 receiving a text input;
6 processing said text input to determine a form specifying a spoken output for

7 said received text;

8 comparing said determined form of said text input with said entries in said text-
9 to-speech cache memory;

10 logging when one of said plurality of entries in said text-to-speech cache memory
11 is matched to said received text input; and

12 periodically updating said score for each one of said plurality of entries of said
13 text-to-speech cache memory.

1 20. A method of administering entries of a cache memory comprising:

2 adding a plurality of entries to a cache memory and assigning a score to each
3 one of said plurality of entries, wherein said scores are used to determine when a
4 corresponding entry is deleted;

5 logging hits in said cache memory between a previous score update and a
6 subsequent score update;

7 periodically updating each said score by multiplying each said score by a
8 predetermined multiplier and adding a value representative of said logged hits for each
9 one of said plurality of entries;

10 clearing said logged hits; and

11 deleting one of said plurality of entries in said cache memory having a lowest
12 score.

1 21. A text-to-speech system comprising a text-to-speech engine for receiving text
2 and producing a spoken output representative of said received text, and a text-to-
3 speech cache memory for storing selected entries corresponding to received text
4 inputs, wherein said entries specify spoken outputs corresponding to said selected
5 received text inputs.

1 22. The text-to-speech system of claim 21, wherein said text-to-speech entries are
2 programmed.

1 23. The text-to-speech system of claim 21, wherein said text-to-speech cache
2 entries include said spoken output.

1 24. The text-to-speech system of claim 21, wherein said text-to-speech cache is
2 shared across multiple text-to-speech processes.

1 25. A machine-readable storage, having stored thereon a computer program having
2 a plurality of code sections executable by a machine for causing the machine to
3 perform the steps of:

4 receiving a text input;

5 comparing said received text input to at least one entry in a text-to-speech cache
6 memory, wherein each said entry in said text-to-speech cache memory specifies a
7 corresponding spoken output; and

8 if said text input matches one of said entries in said text-to-speech cache
9 memory, providing said cached speech output specified by said matching entry.

10 26. The machine-readable storage of claim 25, wherein said text-to-speech cache
11 entries include said spoken output.

12 27. The machine-readable storage of claim 25, wherein said text-to-speech cache is
2 shared across multiple text-to-speech processes.

1 28. The machine-readable storage of claim 25, further comprising:
2 logging each said match of said text input with a text-to-speech cache entry.

1 29. The machine-readable storage of claim 25, wherein said text input does not
2 match an entry in said text-to-speech cache memory, said machine-readable storage
3 further comprising:

4 determining a spoken output corresponding to said text input; and

5 storing an entry in said text-to-speech cache memory corresponding to said text
6 input, wherein said entry specifies said determined spoken output.

1 30. The machine-readable storage of claim 29, further comprising:
2 removing one of said entries in said text-to-speech cache memory.

1 31. The machine-readable storage of claim 29, wherein each said entry in said text-
2 to-speech cache memory has a score, said machine-readable storage further
3 comprising:
4 periodically updating each said score.

1 32. The machine-readable storage of claim 29, further comprising:
2 removing one of said entries in said text-to-speech cache memory having a
3 lowest score.

1 33. The machine-readable storage of claim 25, wherein said received text input
2 includes corresponding attributes and said entries in said text-to-speech cache memory
3 include attributes.

1 34. The machine-readable storage of claim 33, said comparing step further
2 comprising:
3 comparing said attributes of said received text input with attributes of said entries
4 in said text-to-speech cache memory.

1 35. A machine-readable storage, having stored thereon a computer program having
2 a plurality of code sections executable by a machine for causing the machine to
3 perform the steps of:
4 storing a plurality of entries in a text-to-speech cache memory, wherein each one
5 of said entries comprises a processed form specifying a spoken output;

6 receiving a text input;
7 processing said text input to determine a form specifying a spoken output for
8 said received text;
9 comparing said determined form of said text input with said entries in said text-
10 to-speech cache memory;
11 if said text input matches one of said entries in said text-to-speech cache
12 memory, providing said cached speech output specified by said matching entry.

1 36. The machine-readable storage of claim 35, wherein said text-to-speech cache
2 entries include said spoken output.

37. The machine-readable storage of claim 35, wherein said text-to-speech cache is
shared across multiple text-to-speech processes.

38. The machine-readable storage of claim 35, further comprising:
logging each said match of said text input with a text-to-speech cache entry.

39. The machine-readable storage of claim 35, wherein said text input does not
match an entry in said text-to-speech cache memory, said machine-readable storage
further comprising:

4 determining a spoken output corresponding to said text input; and
5 storing an entry in said text-to-speech cache memory corresponding to said text
6 input, wherein said entry specifies said determined spoken output.

1 40. The machine-readable storage of claim 35, further comprising:
2 removing one of said entries in said text-to-speech cache memory.

1 41. The machine-readable storage of claim 35, wherein each said entry in said text-
2 to-speech cache memory has a score, said machine-readable storage further
3 comprising:
4 periodically updating each said score.

1 42. The machine-readable storage of claim 41, further comprising:
2 removing one of said entries in said text-to-speech cache memory having a
3 lowest score.

1 43. A machine-readable storage, having stored thereon a computer program having
2 a plurality of code sections executable by a machine for causing the machine to
3 perform the steps of:

4 storing a plurality of entries in a text-to-speech cache memory, wherein each
5 said entry comprises a processed form specifying a spoken output;

6 assigning a score to each one of said plurality of entries;

7 receiving a text input;

8 processing said text input to determine a form specifying a spoken output for
9 said received text;

10 comparing said determined form of said text input with said entries in said text-
11 to-speech cache memory;

12 logging when one of said plurality of entries in said text-to-speech cache memory
13 is matched to said received text input; and

14 periodically updating said score for each one of said plurality of entries of said
15 text-to-speech cache memory.

1 44. A machine-readable storage, having stored thereon a computer program having
2 a plurality of code sections executable by a machine for causing the machine to
3 perform the steps of:

4 adding a plurality of entries to a cache memory and assigning a score to each

5 one of said plurality of entries, wherein each said score determines when a
6 corresponding entry is deleted;
7 logging hits in said cache memory between a previous score update and a
8 subsequent score update;
9 periodically updating each said score by multiplying each said score by a
10 predetermined multiplier and adding a value representative of said logged hits for each
11 one of said plurality of entries;
12 clearing said logged hits; and
13 deleting one of said plurality of entries in said cache memory having a lowest
14 score.

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